History Timeline

2009-1950

Updated as of October 19, 2009

ITL Milestones	Legislation and Computing History
2009 – **ITL leads task group developing Smart Grid cyber security strategy and requirements.** **2009 -** **ITL issues Federal Information Processing Standard (FIPS) 186-3, Digital Signature Standard (DSS), which specifies stronger algorithms for digital signatures in the exchange of information among federal agencies.** **2009 –** **ITL researchers demonstrated single photon level spectroscopy for elusive infrared (IR) region**. **2009 –** **ITL's Cryptographic Algorithm Validation Program Validates 1,000th Advanced Encryption Standard (AES) Algorithm**. **2009 -** **ARRA Legislation Codifies the Role of NIST/ITL in Health IT for the First Time**	**2009 -** **American Recovery and Reinvestment Act**
2008 – **ITL voting team received the Department of Commerce Gold Medal for developing voting system guidelines for the nation**.	

2008 – ITL's Cryptographic Module Validation Program Validates 1,000th Cryptographic Module.

2008 – ITL's Computer Security Division received Governmentwide Initiatives Excellence Award.

2008 – ITL publishes roadmap to federal agencies on implementing Internet Protocol Version 6 (IPv6).

2008 – ITL Visualization Group won a Department of Energy Office of Advanced Scientific Computing Research Award for their visualization work.

2008 – ITL's Refreshable Scanning Tactile Graphic Display received U.S. Patent. The invention enables devices allowing users to "view" text, Braille, and imagery using the sense of touch.

2007 – American National Standard ANSI/NIST-ITL 1-2007, Data Format for the Interchange of Fingerprint, Facial, & Scar Mark & Tattoo (SMT) Information, approved.

2007 – ITL received the Department of Commerce Gold Medal for its Personal Identity Verification work.

2007 – ITL launched public competition to develop a new cryptographic hash algorithm to strengthen the security of federal information.

2007 – ITL delivered final voluntary voting system guidelines to U.S. Election Assistance Commission to

2007 - Energy Independence and Security Act

2007 - America COMPETES Act

improve the nation's voting systems. **2007 - ITL researchers received the R&D 100 Award for building the high-speed fiber Quantum Key Distribution (QKD) system.**	
2006 - Federal Information Processing Standard (FIPS) 200, Minimum Security Requirements for Federal Information and Information Systems approved.	**2006 - Patriot Act renewed by Congress.**
2005 – Federal Information Processing Standard (FIPS) 201, Standard for Personal Identity Verification of Federal Employees and Contractors, approved. **2005 – Cryptographic Module Validation Program (CMVP) 500th validation certificate issued.** **2005 – Draft voluntary voting guidelines delivered to the Technical Guidelines. Development Committee and the Election Assistance Commission** **2005 - ITL Signs Formal Memorandum of Understanding with the Dept. of Health and Human Services Office of the National Coordinator to Collaborate on Health IT** **2005 – ITL/industry-developed ISO/IEC Standard 25062 *Software Engineering-Software Quality and Requirements Evaluation - Common Industry Format for***	

Usability Test Reports, approved.

2005 – Under ITL leadership, five critical international biometric standards were approved.

2004 – ITL team received the Department of Commerce Gold Medal for smart card specifications.

2004 – National Software Reference Library (NSRL) data set exceeded ten million Secure Hash Algorithm (SHA)-1 hashes.

2004 – FIPS 199, *Standards for Security Categorization of Federal Information and Information Systems*, approved.

2004 – ITL-developed Role Based Access Control (RBAC) standard approved as American National Standard INCITS 359-2004.

2004 – Five biometric data interchange format standards and two biometric profile standards approved as American National Standards.

2004 - Homeland Security Presidential Directive 12, *Policy for a Common Identification Standard for Federal Employees and Contractors*, issued.

2003 - ITL received the Department of Commerce Gold Medal for its biometrics work.

2003 – Extensible Markup Language (XML) conformance test suite released.

2003 – First test results published for Computer Forensics Tool Testing (CFTT) Project.

2002 - [Role Based Access Control (RBAC) development team received the Department of Commerce Gold Medal.](#)

2002 – [NIST quantum information program initiated.](#)

2002 – [Face Recognition Vendor Test Report published.](#)

2002 – [Online NIST/SEMATECH e-Handbook of Engineering Statistics issued.](#)

2002 – [Voluntary voting guidelines project launched, mandated by the Help American Vote Act (HAVA) (P.L.107-252).](#)

2002 – [ITL tasked to develop standards and guidelines for improved agency management of secure information systems by Federal Information Security Management Act (FISMA) (Title III of E-Gov) (P.L.107-347).](#)

2001 - [ITL team received the Department of Commerce Gold Medal for development of the Advanced Encryption Standard (AES)](#)

2001– [FIPS 197, *Advanced Encryption Standard (AES)*, approved.](#)

2001 – [National Software Reference Library (NSRL) released Reference Data Set version 1.0.](#)

2001 – [The E-Book/Braille Reader development team received the R&D 100 Award.](#)

2001 – [ITL's biometrics research focused on homeland security by the USA PATRIOT Act (P.L.107-056).](#)

2001 – [NIST celebrated its Centennial.](#)

2000 – [American National Standard ANSI/NIST-ITL 1-2000, *Data Format for the Interchange of Fingerprint, Facial, & Scar Mark & Tattoo (SMT) Information*, approved.](#)

2000 – ITL team received the Department of Commerce Gold Medal for first global industry standard for electronic books.

1999 – Under ITL leadership, ISO/IEC 15408: 1999, Common Criteria for IT Security Evaluation, approved.

1997 – Digital Library of Mathematical Functions (DLMF) project initiated.

1997 – ITL-developed S-Check received R&D 100 Award.

1995 – Multi-national Cryptographic Module Validation Program (CMVP) established.

1994 - Guide to Available Mathematical Software (GAMS) premiers as first NIST publically accessible World Wide Web site

1994 – ITL team received Department of Commerce Gold Medal for research in cryptography.

1993 – FIPS 182, *Integrated Services Digital Network (ISDN)*, approved.

1992 – MultiKron developed to promote high-performance computing and flexible scalable systems.

1992 – Text Retrieval Conference (TREC) and research program initiated.

1992 – FIPS 151-2, *POSIX*, validation testing program initiated.

1992 – Validation testing services initiated for FIPS 160, C.

1999 – Concerns about potential damages to computers from Y2K were widespread.

1996 – Information Technology Laboratory (ITL) formed through merge of NIST computing and applied mathematics laboratories.

1996 – Information Technology Management Reform Act (P.L. 104-106) replaced the Brooks Act and reaffirmed NIST's responsibilities to develop standards and guidelines for federal computer systems.

1991 - NIST established Computing and Applied Mathematics Laboratory.

1991 – Computer Systems Laboratory (CSL) renamed from National Computer Systems Laboratory (NCSL).

1991 – [FIPS 160, *C,* approved.](#)	
1988 - [FIPS 140, *General Security Requirements for Equipment Using the Data Encryption Standard.*](#) **1988 – FIPS 151, *Portable Operating System Interface (POSIX),* approved.** **1988 – [TIMIT Acoustic Phonetic Continuous Speech Database, first speech corpora CD, released to speech research community.](#)** **1987 – [FIPS 127, *Database Language SQL,* approved.](#)** **1986 – [Staffer received the DoC Gold Medal for automating fingerprint identification processes.](#)** **1984 – [NBS/ICST accredited as American National Standards developer.](#)** **1981 – Validation testing services initiated for [FIPS 68, *Minimal BASIC,*](#) and [FIPS 69](#), *FORTRAN*; [see historical paper](#).** **1980 – [FIPS 68, *Minimal BASIC,*](#) and [FIPS 69](#), *FORTRAN*, approved.**	**1988 – National Computer Systems Laboratory (NCSL) renamed from Institute for Computer Science and Technology (ICST).** **1988 - Center for Computing and Applied Mathematics established.** **1988 – [National Institute of Standards and Technology Act (P.L.100-418) renamed NBS to National Institute of Standards and Technology (NIST).](#)** **1987 – [Computer Security Act (P.L.100-235) formally assigned to NBS responsibility for computer security for unclassified federal systems.](#)**
1979 – FIPS 60, *I/O Channel Interface,* approved. **1979 – NBS campus-wide local area network (LAN) implemented.** **1977 – FIPS 46, *Data Encryption Standard (DES),* approved; [see](#)**	**1978 - NBS established Center for Applied Mathematics.**

historical paper.

1976 – Standard Reference Materials 1901, 1902, 1903, and 1904 issued for optical character recognition (OCR) characters.

1975 – NBSIR 75-687, *Effective Use of Computer Technology in Vote-Tallying*, published.

1973 – Validation testing services for FIPS 21, *COBOL*, initiated.

1972 – FIPS 21, *COBOL*, approved.

Early 1970s – NBS developed one of five nodes of ARPAnet.

Early 1970s – Efforts initiated to develop standards and guidelines for the protection of unclassified data in federal computer systems.

Early 1970s - First NBS publication in area of computerized scientific data management; see historical paper.

1972 – Institute for Computer Sciences and Technology (ICST) renamed from Center for Computer Science and Technology.

1969 – Standard Reference Material 3200, Secondary Standard Magnetic Tape-Computer Amplitude Reference, issued.

1968 – FIPS 1, *Code for Information Interchange (ASCII)*, approved, inaugurating the Federal Information Processing Standards (FIPS) series; see historial paper.

Mid 1960s – MAGIC, one of the first intelligent computer graphics terminals, developed for federal

1969 - NBS established Center for Computer Science and Technology

1965 - Automatic Data Processing (ADP) standards development at NBS mandated by Brooks Act (P.L.

agencies.

Mid 1960s – Projects initiated to assist the Federal Bureau of Investigation in automating its fingerprint identification system.

1964 – **Classic mathematics reference compendia, *Handbook of Mathematical Functions,* published; see historical paper**.

1963 – *Experimental Statistics Handbook* **published; see historical paper**.

89-306)

1965 - Jack Edmonds published seminal paper in the mathematical theory of combinatorial algorithms; **see historical paper**.

1961 - Churchill Eisenhart published seminal paper on precision and accuracy of instrument calibration systems; **see historical paper**.

1958 - **SEAC used to process and identify structural diagrams of chemical compounds.**

1957 - **SEAC used for NBS research in processing scanned images.**

1950 - Standards Electronic Automatic Computer (SEAC), designed and built at NBS, begins operation; **see historical paper**.

1951 – **U.S. Bureau of the Census began using the UNIVAC I, the first commercial computer.**

1951 - Hestenes and Stiefel developed the method of conjugate gradients; **see historical paper**.

1950 - National Applied Mathematics Laboratories renamed as Applied Mathematics Division.

1950 - Cornelius Lanczos developed first Krylov subspace method for the solution to eigenvalue problems; **see historical paper**.

Late 1940s – NBS funded to develop first stored-program electronic computer to assist Bureau of the Census in 1950

census.

1947 - NBS established the National Applied Mathematics Laboratories (NAML) with branches for numerical analysis, computation, machine development, and statistical engineering.

1947 - [John Curtiss, Director of NAML, is elected the first President of the Association for Computing Machinery (ACM)](#)

1938 - [NBS launched the Math Tables Project in New York City on behalf of the Works Projects Administration (WPA).](#)

1901 – Congress created the National Bureau of Standards as the federal government's first physical science research laboratory.